

Loss Mitigation Grant Program Wind Resistive Device (WRD) Product Evaluation

The product as described herein has been evaluated by the Department of Commerce and Consumer Affairs (DCCA) for compliance with the technical requirements for wind resistive devices installed in single or multi-family residential dwellings. Installation costs of approved products are partially reimbursable under the provisions of the Loss Mitigation Grant Program. The results of the product evaluation are presented in the following report.

1.0 Product Information

1.1 Product Name:

“180” Vertical Garage Door Bracing System

1.2 Description:

“180” Vertical Garage Door Bracing System is a telescoping aluminum tube anchored to the wall above the garage door, into the garage floor, and at each hinge of the garage. Depending on the width of the garage one to three braces may be installed at the vertical rows of hinges. The braces are designed to be temporarily placed in the event of a hurricane to provide increased positive, negative, and upward wind pressure resistance.

1.3 Category:

Submitted for evaluation as a WRD option 3- Exterior opening protection

1.4 Submitted By:

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2.0 Product Evaluation

2.1 Wind Loads:

a. Static Pressure:

The “180” Vertical Garage Door Bracing System was tested per ASTM E330-90, “Test Method for structural performance of exterior windows, curtain walls, and doors by uniform static air pressure difference.” The results of these tests and allowable loads are given in table 1.

Table 1. Static Pressure Test Results

Test Method	Test Conditions	WRD Requirements	Test Conclusion
Static Load Test	+90.0 psf, -90.0 psf	IBC Section 1714.5.2	PASS

b. Cyclic Pressure and Impact Resistance:

Not required per AC222 “Acceptance criteria for upward acting, exterior garage doors with specified allowable wind pressures”

2.2 Installation:

The “180” Vertical Garage Door Bracing System is to be installed in accordance with the manufacturer’s published installation instructions, engineering drawings and this report.

The manufacturer’s published installation instructions and this report shall be strictly adhered to and a copy of these shall be available at all times on the job site during installation.

2.3 Substantiating Data:

- a. Manufacturer’s descriptive literature, specifications and installation instructions
- b. Secure Door Structural Performance Test Report, prepared by National Certified Testing Laboratories, Test Report No. NCTL-210-2064-1 (S) dated 02/03/2004, Signed and Sealed by Frank L. Bennardo, P.E. (FL License No. 0046549)

3.0 Findings

Evaluation in review of the submitted data indicates that “180” Vertical Garage Door Bracing System as described in this report does conform to the requirements of the loss mitigation grant program and is an acceptable WRD for use on garage door openings of masonry and double wall construction only.

No anchorage details or test results have been provided for single wall construction common to Hawaii. Additional data must be submitted for WRD approved use on this construction type.

Vertical braces must be installed per manufacturer’s recommendations, minimum of two braces for 16’ wide (double) garage doors and one brace for 8’ wide (single) garage doors.

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The disclaimer provided by Secure Door also applies to this approval. The performance of this product as a retrofit is dependent upon the type, quality, condition, and strength of the garage door to which it is attached.

3.1 Limitations:

- a. Secure Door qualifies as an approved WRD product for use on masonry and double wall construction only. Not approved as a WRD device for single wall construction.
- b. Secure Door must be installed in accordance with the installation instructions in this report and the manufacturer's published installation instructions.
- c. Test Report expiration date is 6/30/08, submit updated testing data or recertification prior to that date.

Gary Y. K. Chock, S.E.
Product Examiner
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